do not believe it proved, that the thalamus contains cells giving direct origin to part of said fibres. They find, however, that contrary to Flechsig's and Hoesel's views, the fillet does not present a direct and uninterrupted connection between the cortex on one side and Goll's and Burdach's columns on the other, but that this sensory bulbo-cortical tract involves two neurons, a bulbo-thalamic, represented by Reil's median fascicle (fillet), and a second one connecting the thalamus with the cortex. ONUF.

PHYSIOLOGICAL.

The Physiological Action of Massage.—In the February 1st number of *Lo Sperimentale* (Florence) Dr. Carlo Colombo describes the action of massage upon the various secretory organs of the body and arrives at the following conclusions:

a. Influence of massage upon the secretion of gastric juice.

1. Without massage he was only able to collect in two hours time about 15 ccm. of gastric juice, which was collected in a small bladder. After massage he was able to collect in two hours' time forty cubic centimetres of juice, of which one part was mucus; the remainder was pure gastric juice.

2. A massage of five minutes made but little difference in the secretion of the juice, but if continued for fifteen minutes the maximum secretory intensity is reached, and the proportion of hydrochloric acid and pepsin is not increased.

b. Influence of massage upon the secretion of bile.

1. The quantity and quality of the bile is not changed perceptibly after ten minutes of friction over the hepatic region, and of rubbing over the inferior border of the liver.

2. After ten minutes of concussion the quantity of bile is increased considerably in four hours. The biliary salts of soda and cholesterine are more abundant.

3. Twenty-five minutes of friction produces the same results as ten minutes of concussion.

4. The best effect of the massage would be to combine ten minutes of concussion, with ten of friction.

c. Action of massage upon the secretion of saliva.

1. The submaxillary glands are most sensitive to massage; after five minutes of manipulation the secretion is increased.

2. After ten minutes of massage the greatest intensity of flow is reached, in the submaxillaries as well as the parotids.

3. The saliva secreted, the result of the massage is similar to that which is obtained when the chorda tympani is excited.

d. Influence of massage upon the secretion of urine.

1. The quantity of urine was considerably increased after a local application of massage over the kidneys.

2. The specific gravity was not diminished, but there was an abundant supply of renal epithelium in the sediment and a trace of albumin was observed.

e. Action of massage upon the secretion of spermatazoa.

1. The action of massage upon one of the testicles produced double the quantity of testicular secretion than from the one not massaged.

KRAUSS.

On the Time of Appearance of Secondary Degeneration in the Single Tracts of the Cord.—Dr. K. Schaffer (*Neurolog. Centrbl.*), 1895, No. 9.

Schaffer performed total transverse section of the cord on cats. The animals were killed on the 3d, 4th, 5th, etc., day after the operation respectively. The cord was examined after Marchi's and Algeri's method.

1. The first degenerative changes were observed on four days after the experiment. In ascending direction there was beginning degen-

eration of Goll's columns. In descending direction there was degeneration in Lowenthal's descending marginal fascicle of the anterior column and in the intermediary fascicle of the lateral column (faiscean intermediaire du cordon lateral of Lowenthal).

2. On the sixth day beginning degeneration of the lateral cerebellar tracts (Kleinhirnseitenstrangbahn) was present in addition to the degenerations mentioned under 1.

3. On the 14th day degeneration of the lateral pyramidal tracts is noticed. The highest intensity of florid decay of the medullary sheaths is reached on the 4th day in Lowenthal's fascicles, on the 12th to 14th days in Goll's columns and the cerebellar tracts.

4. The descending degeneration of the posterior columns at the locality of Schultze's comma is to be seen on the 4th day in slight extent; it does not increase later. The temporal succession of the degeneration in the various tracts accordingly corresponds to that of the development of medullary sheaths. Those tracts of the fibres of which receive their medullary sheaths first degenerate first. From Flechsig's researches it is known that the fibres of Goll's columns are supplied with medullary sheaths at the end of the sixth month, those of the cerebellar tracts (Kleinhirnseitenstrangbahn) towards the beginning of the seventh and the pyramidal tracts towards the end of the ninth month, or in other words the same temporal succession as they degenerate. ONUF.

Acute Mania.—DeWitt (*Lancet-Clinic*, June 22, 1895). The medical treatment of these cases is very simple, and can be disposed of in few words. To procure sleep and quiet is perhaps the greatest desideratum, and I know of nothing so certain in its action as chloral hydrate, given in 40 or 60 grains It may be given alone or combined with one of the bromides. Bromidia I have always found very reliable. It is almost certain to quiet and produce sleep. Occassionally one meets with cases that resist the influence of chloral even in large repeated doses; here opium or some of its derivatives either given alone or in connection with the chloral, will be found of service. If hypodermically administered, not less than $\frac{1}{8}$ gr. should be given. Small doses only excite the patient, and do more harm than good. Hydrobromate of hyoscine has some advocates. The milder hypnotics, such as sulfonal, chloralamid, etc., are not to be thought of in these cases; they are practically inert, and do no good. J. C.

PATHOLOGICAL.

The Pathological Anatomy of Chronic Chorea.—*Gazzetta degli Ospedali e Delle Cliniche*, Mar. 16, 1895. At a meeting of the R. Academy of Medicine of Rome, February 25, 1895, Dr. Bignami reported the results of his pathological studies on two cases of chronic chorea in adults, without hereditary history. In one case he found sclerosis of the cerebral arteries, slight thickening of the pia, and atrophy of the gyri in the frontal and parietal lobes, which presented microscopically multiple foci of disseminated chronic encephalitis.

In the other case he found no alterations of the meninges, atrophy of the convolutions, numerous miliary patches, sub-cortical of sclerosis especially in the frontal lobes, a large focus of sclerosis in the external nucleus of the thalamus which diffused itself into the sub-thalmic region interrupting somewhat the radiating fibres of the internal capsule; much smaller foci were also found bilaterally and symmetrically in the red nucleus. Microscopically these foci are composed of a fine fibrillary tissue not in nuclei; cellular elements are also present having large rounded or oval nuclei, and abundance of protoplasm. KRAUSS.

Vertigo.—One of the most valuable contributions to our knowledge of the puzzling symptom known as vertigo has recently come from the pen of Mendel of Berlin. He says that various theories have